

[RANGE OF CLAIMS]

[CLAIM 1]

A dual panel type organic electroluminescent display device, comprising:

first and second substrates having a plurality of sub-pixels defined thereon, the first and second substrates being spaced apart from and opposing each other;

an array element layer on the first substrate, the array element layer having a plurality of thin film transistors each corresponding to each sub-pixel;

a first electrode on an entire inner surface of the second substrate;

an organic light emitting layer beneath the first electrode;

a second electrode beneath the organic light emitting layer, the second electrode corresponding to each sub-pixel;

an electrical connecting pattern between the array element layer and the second electrode and connecting the thin film transistor and the second electrode, the electrical connecting pattern including a material having a plastic deformation property and having a first height; and

a seal pattern formed in an edge portion of the first and second substrates and attaching the first and second substrates,

wherein a first height of the electrical connecting pattern is smaller than an original height of the electrical connecting pattern measured before an attachment of the first and second substrates.

[CLAIM 2]

The device according to claim 1, wherein the first height of the electrical connecting pattern is smaller than the original height of the electrical connecting pattern measured before the attachment of the first and second substrates by 5~20 %.

[CLAIM 3]

The device according to claim 1, wherein the material having a plastic deformation property is selected from conductive organic materials.

[CLAIM 4]

The device according to claim 1, further comprising a protection electrode between the second electrode and the electrical connecting pattern, wherein the protection electrode has a pattern structure corresponding to the second electrode.

[CLAIM 5]

The device according to claim 1, wherein the electrical connecting pattern is electrically connected to the thin film transistor via an additional connecting electrode.

[CLAIM 6]

The device according to claim 1, wherein the electrical connecting pattern is connected to the second electrode via a protection electrode and is connected to the thin film transistor via a connecting electrode.

[CLAIM 7]

The device according to one of claims 4 and 6, wherein the thin film transistor has a gate electrode, a source electrode and a drain electrode, and a connecting electrode contacts the drain electrode.

[CLAIM 8]

The device according to claim 1, wherein the electrical connecting pattern is formed on the array element layer.

[CLAIM 9]

A method of manufacturing a dual panel type organic electroluminescent display device, comprising:

forming an array element layer on a first substrate, the array element layer having a plurality of thin film transistors corresponding to a sub-pixel;

forming an electrical connecting pattern having a first height on the array element layer, the electrical connecting pattern including a material having a plastic deformation property and connected to the thin film transistor;

forming an organic electroluminescent diode on a second substrate, the organic electroluminescent diode having first and second electrodes and an organic light emitting layer between the first and second electrodes;

forming a seal pattern in an edge portion of one of the first and second substrates; and

attaching the first and second substrates using the seal pattern such that the array element layer is connected to the organic electroluminescent diode,

wherein attaching the first and second substrates comprises reducing the first height of the electrical connecting pattern to a second height smaller than the first height by applying a plastic deformation force to the electrical connecting pattern.

[CLAIM 10]

The method according to claim 9, wherein a ratio of a difference between the first and second heights to the first height is within a range of 5~20 %.

[CLAIM 11]

The method according to claim 9, wherein the material having a plastic deformation property is selected from conductive organic materials.

[CLAIM 12]

The method according to claim 9, wherein forming the electrical connecting pattern further comprises forming a connecting electrode connecting the thin film transistor and the electrical connecting pattern.

[CLAIM 13]

The method according to claim 9, further comprising forming a protection electrode having a pattern structure corresponding to the second electrode after forming the organic electroluminescent diode, wherein the second electrode and the electrical connecting pattern are connected to each other via the protection electrode.

[CLAIM 14]

The method according to claim 9, wherein forming the array element layer further comprises forming a connecting electrode connecting the electrical connecting pattern and the thin film transistor, and forming the organic electroluminescent diode further comprises forming a protection electrode connecting the second electrode and the electrical connecting pattern.

[CLAIM 15]

The method according to one of claims 12 and 14, wherein forming the array element layer further comprises forming the thin film transistor having a gate electrode, a source electrode and a drain electrode, wherein the connecting electrode contacts the drain electrode.

[CLAIM 16]

The method according to claim 9, wherein the thin film transistor is a driving thin film transistor.